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10/774,917	02/06/2004	Peter C. Zahrobsky	200401024-1	8858
22879 7590 11/19/2007 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			EXAMINER SHEWAREGED, BETELHEM	
			ART UNIT 1794	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

**MAILED**  
**NOV 19 2007**  
**GROUP 1700**

Application Number: 10/774,917  
Filing Date: February 06, 2004  
Appellant(s): ZAHROBSKY ET AL.

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Gary P. Oakeson  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 10/04/2007 appealing from the Office action mailed 06/14/2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

US 6,492,005 B1	Ohbayashi et al.	12/2002
US 6,129,785	Schliesman et al.	10/2000
US 2003/0064206 A1	Koyano et al.	04/2003

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-23 and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohbayashi et al. (US 6,492,005 B1) in view of in view of Schliesman et al. (US 6,129,785) and Koyano et al. (US 2003/0064206 A1).

Ohbayashi discloses an ink jet recording sheet comprising a support and at least one ink absorptive layer provided on the support (abstract). The recording layer comprises a binder and inorganic particles (col. 13, line 33). The recording layer further comprises a hardener such as boric acid (col. 15, line 51), and a pH adjustor such as potassium carbonate (col. 16, line 30). The potassium carbonate is a weak base and it is equivalent to the claimed alkali metal salt, and when it reacts with the boric acid, bubbles having the claimed diameter are inherently generated in the ink absorptive layer.

Ohbayashi does not teach that the ink absorptive layer has the claimed pH value. At the time of the invention, it would have been obvious to a person ordinary skill in the art to maintain the pH value of the ink absorptive layer within the claimed range in order to control the stability and the viscosity of the composition that would form the recording layer (see col. 2, line 58 thru col. 3, line 4 of Schliesman). Furthermore, it would have been obvious to a person of ordinary skill in the art to adjust the amount of the potassium carbonate so as to control the pH value of the layer.

With respect to claim 21, the use of lithium containing pH adjusting agent such as lithium carbonate is well known in the ink jet recording art before the claimed invention. See [0157] of Koyano.

With respect to the thickness of the ink receiving layer, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the thickness of the ink receiving layer in order to optimize the flexibility of the recording medium and ink-absorbing properties of the layer. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

NOTE: In the reference of Ohbayashi, a high pressure homogenizer was only used during preparation of particle dispersion. The high pressure homogenizer was never used during preparation of ink absorptive layer.

**(10) Response to Argument**

Applicant's argument is based on that the claimed element of an alkali metal present in the ink receiving layer at from 0.4-10wt% has not been shown. This argument is not persuasive for the following reason. Additives are generally added in smaller amount. Since the reference do not teach the claimed range or any range of the alkali metal, the Examiner applied MPEP 2144.05 and indicate that at the time of the invention it would have been obvious to a person of ordinary skill in the art to adjust the amount of the potassium carbonate, and the motivation would be to control the pH value of the layer.

Applicant argued that the lithium hydroxide of Koyano is not a weak base. This argument is not persuasive because the Examiner did not applied the reference of Koyano to teach a lithium hydroxide, instead the reference is used to teach a lithium carbonate which is a weak base. Furthermore, the claimed invention recites lithium carbonate as a weak base (see current claims 18-21).

Applicant argued that the element of gas generated bubbles located within the ink receiving layer has not been shown. This argument is not persuasive for the following reason. None of the references teach or suggest that the boric acid/ hardener does not reach with the potassium carbonate/pH adjuster. The claimed invention does not recite that the acid does not react with the binder. When the hardener of Ohbayashi is added to the composition comprising the binder, the pH adjuster and other components, the hardener reacts with the binder, the pH adjuster and the other ingredients, and gas is being generated when pH adjuster reacted with hardener.

Furthermore, the Applicant has never provided a factual evidence to show that there is no reaction whatsoever between the pH adjuster and the hardener of Ohbayashi.

Applicant argued that the use of the lithium carbonate of Koyano would not only destroy the functionality of the gas bubble formulation, but would also destroy the functionality of achieving the recited pH. This argument is not persuasive for the following reason. Koyano does not teach that the lithium carbonate is an acid. It is established that a basic pH adjuster is used to bring a lower pH value to a higher pH value, and also an acidic pH adjuster is used to bring a higher pH value to a lower pH value. Paragraph [0156] of Koyano provides a support for the fact that basic pH adjuster is used to bring lower pH value to higher pH value.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Betelhem Shewareged



BETELHEM SHEWAREGED  
PRIMARY EXAMINER

Conferees:

*Jeffrey P. ...*  
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